

Compliance Monitoring Report

2017-18



environment
SOUTHLAND
REGIONAL COUNCIL

Te Taiao Tonga



Environmental Compliance Monitoring Report

2017/18

**Report by –
Environment Southland
Compliance Team**

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Foreword

The 2017/18 Compliance Monitoring Report summarises the activities of Council's compliance monitoring and enforcement and technical teams throughout the Southland region.

The summary is also an opportunity to highlight some key trends in environmental monitoring during the past year and benchmark them against the patterns observed during the previous two years.

The year has been very busy with 961 incidents responded to by the team – up 34% on the previous year.

The vast majority of consent holders across dairying, industry, territorial authorities and other organisations performed well in their environmental monitoring and reporting.

There continues to be a strong focus on compliance within the dairy sector.

Monitoring was interrupted by Mycoplasma Bovis this year, but through a mixture of aerial and on-site inspections staff were able to complete a similar number of inspections to last year.

The rate of significant non-compliance dropped this year to 1.9% (down from 4.1% the previous year).

In Southland, all dairy farms are inspected – 941 effluent discharge consents; some more than once in a given year.

We follow up with each of the farms graded as significantly non-compliant, and details of this are readily available on our website.

When a farm is graded as significantly non-compliant there is a range of follow-up actions available. Not all of these actions result in enforcement. Other actions include re-inspection, infringement notices or abatement notices.

In October 2017, we introduced a Diversion Scheme as another tool in the compliance toolbox.

Our compliance approach is based on the 4E's (Enable, Encourage, Educate and Enforce), which remain at the heart of what we do, and the highly successful 'Shed Talk' programme continues to be a key tool for our compliance team.

This year we focused on new consent holders and those with variations to consents who would most benefit from Shed Talks.

As the Regional Air Plan 2016 has kicked in, odour and smoke complaints and incidents have become a higher priority – as can be seen in the 21% increase in incidents we responded to during 2017-18.

The compliance team have contact with an estimated 1,500 Southlanders per year, making them one of the busiest teams at Environment Southland.

The Council would like to take the opportunity thank the compliance team for their dedication and commitment in carrying out their role in a fair and equitable manner. They are appreciated and respected by clients and ratepayers.



N G Horrell
Chairman
Environment Southland



NMG Cook
Chairman
Regulatory Committee

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Introduction

Environment Southland’s Compliance Monitoring Report has been designed to provide an overview of compliance activities from across Southland during the 2017/18 year. It does not cover all of the activities of the area in detail.

Activities with similar parameters, particularly enforcement, incidents, dairy discharge consents and whitebait stands, have been combined to give a broad overview, rather than reporting on individual conditions or circumstances.

In this report, the dairy industry is reported as a collective as the consent conditions for each farm are similar and compliance with these can be easily compared. Dairy inspections result in each farm receiving a grade which ranges from 1: Full compliance through to 10: Significant non-compliance.

Other industries reported here are either the only one of their type in Southland, or significant differences exist between them that would make comparison of their consent conditions of little value.

Major industrial consents, or those of special interest to Southland, have been identified and are included in the report. Industrial consents are often very complex. This is largely due to the nature of the activity and volume of contaminants that an industry uses or discharges. The industries reported here often have their own environmental assessment teams, or use third party contractors to complete the requirements of their consent.

For each of the major industry reports, a table has been included to assess how well the company has kept Environment Southland informed of monitoring results and how they respond to issues. A second table provides an overall assessment of performance against their consent conditions.

Both tables provide a rating in the form of a traffic light system and a comparison between the 2016/17 and 2017/18 year (see below).

Key

Site or consent holders name			
Description of noteworthy event	15/16	16/17	17/18
	Background denotes overall results for year shown in box		

Year

Grading

	<i>Compliance Grade</i>
	FULL COMPLIANCE – Compliance with all relevant consent conditions, plan rules, regulations and national environmental standards.
	LOW RISK NON-COMPLIANCE - Compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (e.g. failure to submit a monitoring report).
	MODERATE NON-COMPLIANCE - Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards. The non-compliance was deemed to have had some environmental consequences and/or there is a moderate risk of adverse environmental effects or there was a frequent recurrence of low risk or technical non-compliance.
	SIGNIFICANT NON-COMPLIANCE - Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards where there were significant environmental consequences and/or a high risk of adverse environmental effects.

Also considered in the gradings are the completeness and quality of the results, evidence of contingency planning, prompt notification of events, completion of full and thorough investigations, maintenance of good communications with Environment Southland, being proactive in addressing or highlighting potential issues, and evidence of environmental ethics.

After consultation with consent holders and stakeholders we decided this year to add a fourth compliance grade (yellow) to better reflect consent performance.

This report is separated into three main parts, Inspection and Audit Activities, Incident Response, and Enforcement.

Since the first Compliance Monitoring report in 1998, the format and detail of the report has changed. If there is an area you would like to see more detail on or something you would like added to the report next year, please let us know.

Part A

Inspection and Audit Activities

1.0 Agricultural Audits

Monitoring was interrupted by *Mycoplasma bovis* this year, however with the use of a mixture of aerial and on-site inspections we were able to complete a similar number of inspections to last year. There were 17 inspections that were rated as being significant non-compliant, out of 922 inspections. This equates to approximately 1.9% significant non-compliant inspections.

1.1 Dairy Inspection Overview

The compliance team undertakes inspections of dairy farms to ensure that there is compliance with the conditions of discharge consents. Discharge consents allow farms to irrigate dairy shed effluent to land.

Dairy shed effluent is created from the milking shed and platform on clean down and is a combination of water and effluent and as such it is an excellent natural liquid fertiliser. It contains nitrogen, phosphorus, potassium, magnesium, sulphur and trace elements essential for grass growth. Normally a farm would have to pay for these nutrients to be applied to pasture.

However, pasture can only use so much effluent at a time. It's important for the person in charge of the system to match the irrigation depth to the capability of the pasture to utilise the nutrients. Over-application of effluent can result in:

- killing pasture – especially where effluent has 'ponded' on top of the soil;
- pollution of groundwater – by seeping too deep into the soil;
- pollution of nearby streams and rivers – where it runs off paddocks into waterways;
- ineffective use of nutrients - by seeping past the root zone before the plant can utilise it.

There are four outcomes following an inspection that determine a dairy farms performance against the conditions of their consent.

	Compliance grade
1	FULL COMPLIANCE with all relevant consent conditions, plan rules, regulations and national environmental standards.
2	LOW RISK NON-COMPLIANCE. Compliance with most of the relevant consent conditions, plan rules, regulations and national environmental standards. Non-compliance carries a low risk of adverse environmental effects or is technical in nature (eg, failure to submit a monitoring report).
5	MODERATE NON-COMPLIANCE. Non-compliance with some of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are some environmental consequences and/or there is a moderate risk of adverse environmental effects.
10	SIGNIFICANT NON-COMPLIANCE. Non-compliance with many of the relevant consent conditions, plan rules, regulations and national environmental standards, where there are significant environmental consequences and/or a high risk of adverse environmental effects.

1.1.1 Discharge Consent Inspections

The inspections during the 2017/18 year have been hampered by the outbreak of *Mycoplasma bovis*. Environment Southland Compliance took a precautionary approach and ceased inspections when it came to light that the disease was identified on Southland farms.

Compliance responded swiftly taking the advice from the Ministry for Primary Industry and obtained wash down kits for all compliance vehicles. We have a clean off policy and our procedures are that our vehicles do not leave the tanker tracks and staff either use on-farm transportation or walk to complete inspections.

Should a vehicle be required to drive on to a farm in the case of an incident, investigation or emergency, that vehicle will not enter another property until it has been water blasted and decontaminated.

This has also led to compliance re-instituting aerial monitoring to ensure that properties are inspected.

During 2017/18, 922 on-site and aerial dairy shed effluent discharge consent inspections were completed. Of these, 801 were fully compliant, 104 were graded low risk or moderate non-compliance, and 17 were graded 10 for significant non-compliance.

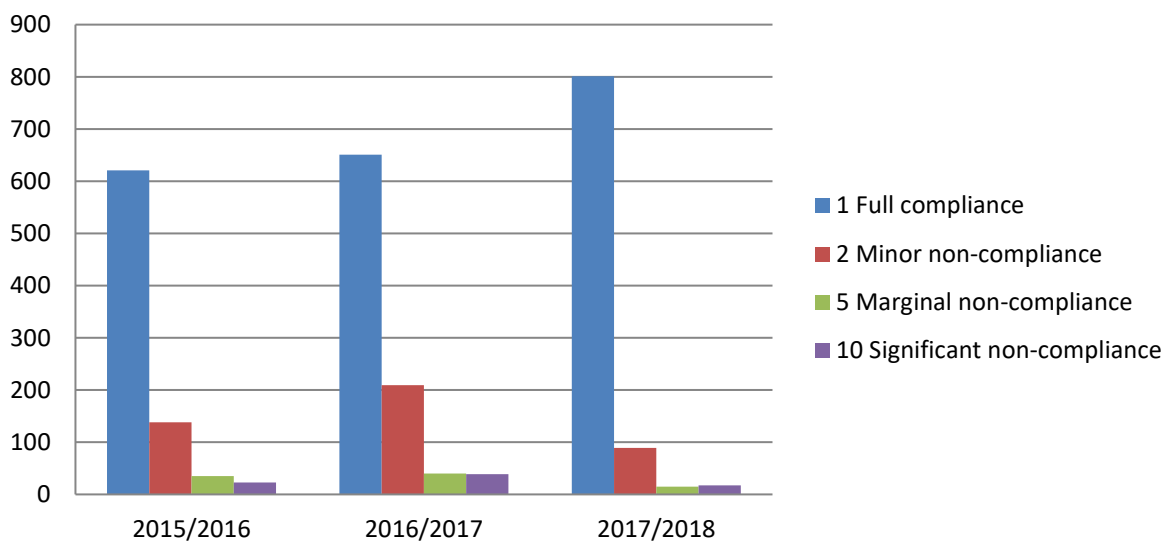


Figure 1 - Comparison of discharge consent inspections over three years

If an inspection results in a grade of 10 (Significant non-compliant), a re-inspection is conducted, some of the re-inspections are not completed due to the season end and are re-inspected early in the new season. Twelve re-inspections were completed for the year 2017/18.

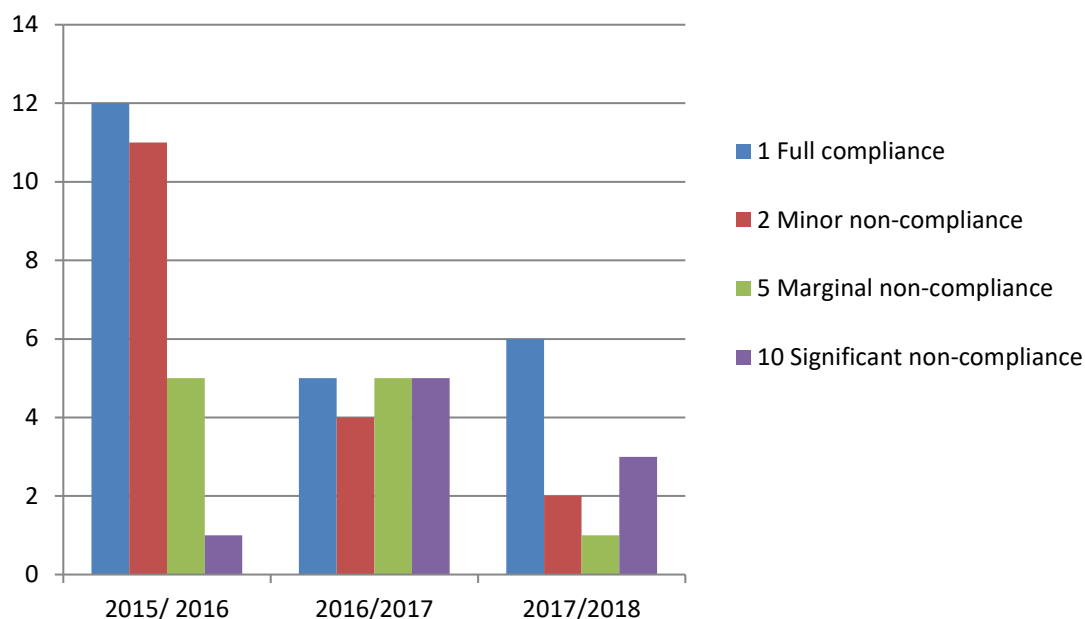


Figure 2 - Comparison of discharge consent re-inspections over three years

1.1.2 Wintering Pad Inspections

Compliance staff undertook inspections of the purpose built sites used to feed and house cows over the winter period commonly known as wintering pads, wintering barns, calving pads, feed pad and loafing pads.

Compliance officers completed 94 inspections in the 2017/18 financial year of the various types of consented wintering pads. There were 70 rated as fully compliant, 21 rated as low risk or moderate non-compliance and 3 significant non-compliant.

1.2 Groundwater Quality Sampling for Dairy

Groundwater is freshwater that has made its way down through the soil to underground areas called 'aquifers'. Aquifers are subsurface geological formations consisting of sand, gravel or rock which 'hold' water. Aquifers in Southland tend to be shallow. In many places the water level is only 1.5 to 5.0 metres below the ground.

Groundwater provides an important source of drinking water for people and livestock in Southland. It's also used for irrigation and dairy shed wash down, and it can be the primary source of water in streams over summer (baseflow).

However, what we do on top of the land (land use) can affect the quality of the groundwater sitting below. Nitrate contamination of groundwater is common in Southland due to excess nitrogen in soil from fertiliser and effluent. This is a key issue as it affects the health of people and livestock that use groundwater, and when nitrate contaminated groundwater enters streams in summer it can cause problem algal and plant growth.

Groundwater quality sampling is a tool used to monitor compliance with dairy effluent discharge consents. The purpose of this programme is to look for measureable changes over time in groundwater quality in the areas where effluent is applied.

Water samples are collected from shallow bores near the effluent disposal field and are then analysed for a number of parameters including nitrate and *E.coli* levels. The results generated from at least a five-year period can give a reasonable indication of

the effects effluent application is having on groundwater. If deterioration is noted, further investigation will be required to confirm that the change is associated with dairy effluent irrigation.

By April 2018, there were 281 discharge consents where the effect of dairy effluent discharge on groundwater was included as a monitoring condition on the effluent discharge consent. However, only 241 samples were able to be collected in November 2017 and 224 samples in April 2018.

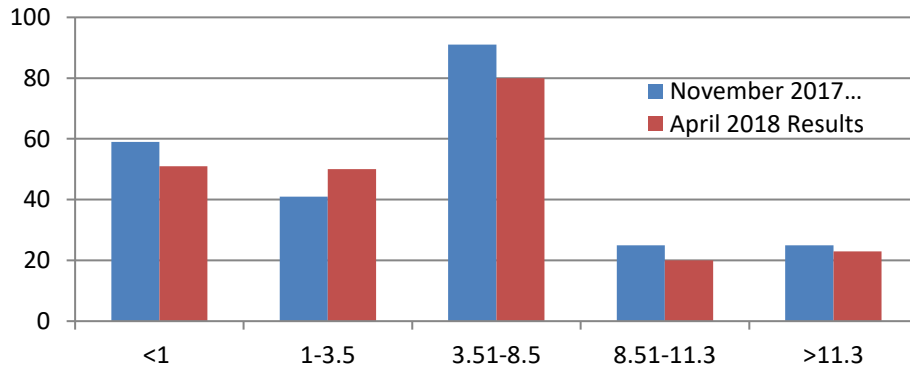


Figure 3 - Dairy groundwater monitoring nitrate results for November 2017 and April 2018 (measured as g/m3)

1.3 Irrigation Water Consents

There were 1,106 active water permits with Environment Southland over the 2017/18 year, and 88% of those consents were for water used within the agricultural sector.

Of the 973 agricultural water permits, 845 were for water needed for Dairying, and 120 were for Irrigation. Additionally, the vast majority of the consents were for abstraction of groundwater, with only 52 surface water abstraction consents.

Agricultural water consents

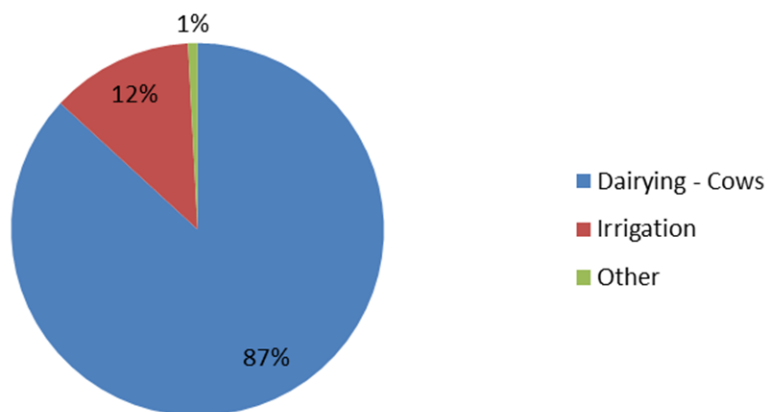


Figure 4 - Agricultural water use in Southland

Each consent holder has a daily abstraction limit based upon available allocation within the groundwater zone or catchment, and they're required to submit records of the volume of water abstracted to show compliance with their consent conditions.

Irrigation water consents

During the 2017/18 irrigation season there were 120 irrigation consents. Of those, 99 were for abstraction from groundwater, and 21 were for abstraction from surface water.

Irrigation in Southland is predominantly to encourage pasture growth, with 94 of the irrigation consents identified as being for pasture irrigation, 20 for crop irrigation, 1 for horticulture, and 5 for recreational use.

Irrigation Industry Purpose

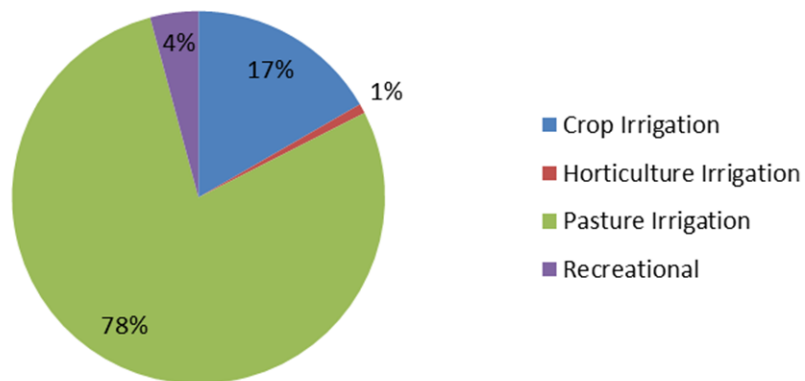


Figure 5 - Irrigation use in Southland

Water shortage

In 2017, Southland experienced its driest year since 1971, with only 79% of normal rainfall being received, which resulted in a 'medium scale adverse event' drought classification being declared on the 26th of January 2018. The dry conditions meant that many rivers and aquifers across the region dropped to their lowest levels since records began. It also meant that environmental limits were reached resulting in many large volume water consents being required to restrict and/or completely stop their abstraction of water in order to protect supply for smaller users, as well as to maintain eco-system requirements.

Environment Southland has an automated alarm system which alerts large volume water consent holders when rivers or aquifers associated with their consent have dropped below the threshold they are allowed to abstract up to, and over the 2017/18 summer 533 alerts were sent out.

There were 40 consent holders which were required to restrict the volume of water they took, with 70 alerts being triggered at various times throughout the summer, as water levels rose and fell.

Additionally, 78 consent holders had to completely cease their abstractions, because river/aquifer levels reached such critical levels, with 399 alerts triggered over the summer period.

2.0 Industrial Audits – Major Industries

2.1 Meat Industry

2.1.1 Alliance Group Limited

Alliance Group Limited operates three meat processing plants in Southland, at Lorneville, Makarewa and Mataura.

What do we look at?

The consents issued for the Alliance Group's plants permit the discharge of treated wastewater into water and on to land. Alliance also holds resource consents for discharges to air, as well as land use and water abstraction.

Compliance was assessed against the current resource consents.



Upstream Sampling Site, Alliance Group Mataura Plant.

Lorneville

Consents

Alliance Group Limited holds 14 resource consents for the Lorneville plant. The primary consents are as follows:

- discharge of treated wastewater to the Makarewa River;
- discharge of treated wastewater to land;
- discharge of wastewater and stockyards solids to land;
- discharge of contaminants to air;
- discharge of stormwater into an open drain;
- take surface water from the Makarewa and Oreti Rivers.

Complaints and self-reported incidents			
Three complaints were received alleging odours from the Lorneville Plant during 2017/18. These were not confirmed by ES staff.	15/16	16/17	17/18

Consent performance summary			
<p>Two exceedances of the 24-hour ambient PM₁₀ concentration limits were reported in June 2018. Investigations into the monitoring unit associated with these exceedances, found that the measurements provided were unreliable and a replacement instrument has been sought. A technical non-compliance was recorded due to the inaccuracy of the data provided, however, additional stack testing was not required. All other air discharge consent monitoring was compliant for the 2017/18 period.</p> <p>All other consents were substantially compliant for the 2017/18 period. Some minor non-compliances were reported for wastewater monitoring; these were identified and responded to appropriately by Alliance. Water abstraction rates were compliant during this period.</p>	15/16	16/17	17/18

Makarewa

Consents

Alliance Group Limited holds seven resource consents for the Makarewa plant, as follows:

- discharge wastewater to the Makarewa River;
- discharge treated wastewater to land;
- discharge stormwater to the Makarewa River;
- take groundwater for meat processing;
- take surface water for meat processing;
- discharge contaminants to land from a landfill;
- to plant trees on the bank of the Makarewa River.

Complaints and self-reported incidents

There were no complaints or self-reported incidents relating to the Makarewa Plant for the 2017/18 period.	15/16	16/17	17/18
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Consent performance summary

The discharge of treated wastewater to the Makarewa River occurred sporadically over the 2017/18 period. All sample results were within the consented limits for this period.	15/16	16/17	17/18
All other monitoring conditions were met for the 2017/18 period.			

Mataura

Consents – Mataura

Alliance Group Limited holds seven resource consents for the Mataura plant, as follows:

- discharge of contaminants, including odour, to air;
- discharge of treated meat works wastewater to the Mataura River;
- discharge of stormwater to the Mataura River;
- discharge of cooling water to the Mataura River;
- discharge of wastewater treatment solids to land;
- take water from a water race fed by the Mataura River for meat processing;
- take surface water for pelt and hide processing.

Complaints and self-reported incidents

<p>A total of 26 complaints were received from members of the public relating to suspected odours originating from the Mataura plant in 2017/18. Several complaints were confirmed and a Notice of Direction was issued. Two potential odour sources were identified by Alliance and mitigation measures were effectively implemented.</p> <p>An Abatement Notice was also issued, directing Alliance Mataura to continuously record water abstraction data, in accordance with the Resource Management (Measurement and Reporting of Water Takes) Regulations 2010.</p>	15/16	16/17	17/18
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Air discharge consent performance

<p>As reported above, the air discharge consent was breached on several occasions during the 2017/18 period due to odour issues.</p>	17/18
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Consent performance summary

<p>The wastewater discharge from the Mataura plant was within consented limits for the 2017/18 period, with the exception of some minor BOD₅ exceedances and a TSS exceedance in May 2018. Investigations were completed when required.</p> <p>All wastewater treatment solids and soil analyses were within consented limits and water abstraction volumes were compliant for the 2017/18 period. Audit sampling was completed by ES in September 2017 and no issues were raised.</p>	15/16	16/17	17/18
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2.1.2 Blue Sky Meats (NZ) Limited

Consents

Blue Sky Meats (NZ) Limited holds four resource consents for the purpose of meat processing at its Morton Mains plant.

They are:

- to take groundwater for a meat processing operation
- to discharge contaminants to the ground through the operation of offal pits
- to discharge wastewater to land via a spray irrigator
- to discharge contaminants to air from a rendering and blood drying plant, boiler plant, and wastewater treatment and irrigation

Blue Sky Meats Limited operates a meat processing plant at Morton Mains, near Woodlands.

What do we look at?

Blue Sky Meats holds four resource consents. The consents issued for its operation permit the taking of groundwater, and the discharge of contaminants to air and to the land. Compliance is assessed against these resource consents.

Complaints and self-reported incidents			
<p>One complaint was received regarding an odour believed to have originated from the Blue Sky Meats operation. This was investigated by ES staff and was confirmed to be coming from the wastewater that was being irrigated at the time.</p> <p>There were four incidents reported during the 2017/18 period; all four were self-notifications. Three of the incidents resulted in wastewater entering a stream running through the Blue Sky Meats farm, and these incidents were confirmed to have breached the consent conditions and appropriate enforcement action taken.</p> <p>The fourth incident was in relation to a water treatment sump overflow. This was assessed to have had minimal to no effect.</p>	15/16	16/17	17/18

Consent performance			
<p>Environment Southland conducts routine consent monitoring once every 2 months. During these inspections no significant issues were identified with the water quality in the receiving waters.</p> <p>The three reported incidents, which all related to the operation of the wastewater treatment system, resulted in consent non-compliance.</p> <p>The company has modified the new wastewater treatment pond, and made improvements to the irrigation setup. It is expected that this will help the company better manage its effluent disposal.</p>	15/16	16/17	17/18

2.1.3 South Pacific Meats Limited

Consents

South Pacific Meats Limited holds three resource consents for the purpose of meat processing at its Awarua plant.

They are:

- to discharge stormwater containing contaminants into the New River Estuary;
- to discharge contaminants to air from a rendering plant, wastewater treatment plant, boiler and associated processes;
- to discharge meat works effluent sludge to land.

South Pacific Meats Limited operates a meat processing plant at Awarua, approximately 10km south of Invercargill.

What do we look at?

South Pacific Meats holds three resource consents. The consents permit the discharges to land, to air, and to water. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

There were no confirmed complaints relating to the South Pacific Meats Plant during the 2017/18 reporting period.	15/16	16/17	17/18
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Consent performance

The South Pacific Meats plant was technically non-compliant with the provision of monitoring data in accordance with their reporting requirements.	15/16	16/17	17/18
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2.1.4 Prime Range Meats Limited

Consents

Prime Range Meats Limited holds two resource consents for the purpose of meat processing.

The consents are:

- to discharge contaminants, including odour, to air from a meat works and rendering plant, and from a wastewater treatment system;
- to discharge treated wastewater to land from a meat processing operation.

Prime Range Meats Limited operates a meat processing plant on the banks of the Waikiwi Stream in Invercargill. In addition to this, Prime Range Meats operates a small meat processing operation and wholesale outlet on the outskirts of Invercargill.

What do we look at?

Prime Range Meats holds two resource consents. The consents permit the discharge to air from the main plant, and the discharge of wastewater to land from its small processing operation. Compliance is assessed against these consents.

Complaints and self-reported incidents

A complaint was received regarding an odour believed to have originated from the Prime Range Meats Plant. This was not confirmed by ES staff.

15/16

16/17

17/18

Consent performance

Prime Range Meats was technically non-compliant with the provision of monitoring data in accordance with their reporting requirements.

15/16

16/17

17/18

2.2 Dairy Industry

2.2.1 Fonterra Co-operative Group Limited

Consents

Fonterra Co-operative Group Limited holds ten resource consents related to dairy processing at its Edendale Plant.

These include:

- to take groundwater for a dairy operation, and for the purpose of milk processing;
- to discharge process wastewater to land, and associated odours;
- to discharge treated wastewater, process water, and stormwater to water;
- to discharge contaminants and odour to air from the manufacturing of dairy products, boiler operation, and wastewater treatment system;
- to discharge waste sludge and liquids to land;
- to discharge whey by-product to land.

Fonterra Co-operative Group Ltd operates a milk processing facility at Edendale.

What do we look at?

Fonterra holds ten resource consents. The consents permit the taking of groundwater, the discharge to air, and the discharge of wastewater to land and to water. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

Complaints and self-reported incidents			
Four environmental incidents were received by Environment Southland during the 2017/18 reporting period. All were self-reported incidents. These were dealt with internally by Fonterra. No significant environmental effects were observed from any of the four incidents.	15/16	16/17	17/18

Consent performance			
Where breaches or exceedances occurred Fonterra staff addressed the issues in a timely manner. A non-compliance was recorded in relation to the taking of groundwater. This was for the non-supply of data. There was no environmental effect as a result of the non-compliance. There were some exceedances for the discharge of wastewater and process water that discharges to the Mataura River. These were investigated and found to have had little to no effect on the river.	15/16	16/17	17/18

Consent performance

A technical non-compliance was observed for the discharge of whey to land. ES staff were notified and the matter was dealt with internally by Fonterra.

There were two minor non-compliances for the discharge of dairy liquids to land. The non-compliances were technical in nature and resulted in Fonterra modifying its procedures to prevent reoccurrence.

Nine breaches were reported in relation to the operation of the boilers. These were due to exceedance of the stream load consent limit. Although the exceedances were minor they did occur predominantly over a three month period.

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2.2.2 Open Country Dairy (NZ) Limited

Consents

Consents

Open Country Dairy holds two resource consents related to its dairy processing plant.

They are:

- to discharge condensate and stormwater to a farm drain
- to discharge contaminants to the air from a milk processing plant and boiler

Open Country Dairy (NZ) Limited operates a milk processing plant at Awarua, to the south of Invercargill.

What do we look at?

Open Country Dairy (NZ) Limited has two resource consents. The consents permit the discharge of condensate and stormwater to a farm drain and pond, and the discharge to air from the boiler and milk powder plant. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

No complaints or self-reported environmental incidents were received by Environment Southland relating to Open Country Dairy (NZ) during the 2017/18 reporting period.

15/16

16/17

17/18

Consent performance

An exceedance occurred in relation to the operation of the boiler plant. The plant exceeded its limit for the discharge of particulate emissions from the boiler stack.

There was an exceedance identified in relation to the discharge of stormwater from the site. The limit for total suspended solids was exceeded on 2 out of 4 occasions.

15/16

16/17

17/18

2.3 Energy Industry

2.3.1 Pioneer Energy Limited

Consents

Pioneer Generation Ltd holds 18 resource consents for its Monowai Station.

They include:

- to take surface water;
- to use, maintain and alter an existing earth dam;
- to discharge water to water;
- to discharge contaminants to land;
- to dam and divert the waters of the Monowai River.

The power generation station at Monowai, owned by Pioneer Generation Ltd, is a community owned electricity provider and wholesaler. The station was owned by Trust Power until 2003, when it was sold to Pioneer, which is owned by the Alexandra based charitable trust, The Central Lakes Trust. The company operates 13 power stations in Central Otago and Southland.

What do we look at?

Pioneer Generation Ltd has 18 consents to operate their power generation scheme. The consents are for the ongoing operation and maintenance of the Monowai Power Station. They control the take, use and discharge of water for power generation, while maintaining minimum flows in all of the existing waterways. Compliance is assessed against these consents.

Complaints and self-reported incidents

No complaints or self-reported environmental incidents were received by Environment Southland relating to Pioneer Energy during the 2017/18 reporting period.

15/16

16/17

17/18

Consent performance

Pioneer has achieved compliance with the Operating Guidelines for the management of Lake Monowai.

The consented guideline flow regime was complied with at all times over the reporting period.

Compliance was achieved with all other consented monitoring and reporting requirements for the 2017/18 reporting period.

15/16

16/17

17/18

2.3.2 Meridian Energy Limited

Consents

Meridian Energy Ltd holds 35 resource consents related to the operation of the Manapouri Power Scheme.

They include:

- to dam and divert the waters for hydro- electric power generation;
- to take and use water for hydro-electric production, and for domestic supplies;
- to discharge treated sewage to land;
- to discharge stormwater to land;
- to carry out bed disturbance;
- to discharge contaminants to air;
- to discharge water and contaminants to the coastal marine area;
- to occupy Lake Manapouri and coastal marine area with wharves.

Meridian Energy Ltd operates the largest hydroelectric power station in New Zealand at West Arm, Lake Manapouri within the Fiordland National Park. Electricity is generated using water stored in Lakes Te Anau and Manapouri. The stored water from the lakes is controlled using structures at the outlet of Lake Te Anau and the Lower Waiau River. The water used to generate electricity is discharged through two tunnels to Deep Cove in Doubtful Sound. Compliance performance was assessed against the current resource consents.

What do we look at?

Meridian Energy Ltd has 35 consents to operate their power generation scheme. Compliance is assessed against these consents.

Complaints and self-reported incidents			
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Meridian Energy during the 2017/2018 reporting period.	2015	2016	2017

Consent performance			
There was a good level of compliance demonstrated during the 2017 reporting period. There were some minor exceedances reported. These related to the operation of turbidity instrumentation, and the management of flows through the Te Anau lake control structure, and did not cause any environmental effects.	2015	2016	2017



Manapouri Power Scheme

2.4 Manufacturing Industry

2.4.1 New Zealand Aluminium Smelters Limited

Consents

NZ Aluminium Smelters Limited holds six discharge and water take consents that require inspecting, as follows:

- discharge contaminants to land where they may enter coastal water;
- discharge treated sewage to land;
- discharge treated effluent to the Coastal Marine Area (CMA);
- discharge of water including contaminants to the CMA;
- discharge of contaminants to air from the aluminium smelter and related activities;
- take and use groundwater for industrial supply.

NZ Aluminium Smelters Limited (NZAS) is located on the Tiwai Peninsula at Awarua, and produces some of the purest aluminium in the world.

What do we look at?

NZAS holds nine resource consents, six of which have monitoring and inspection requirements. Compliance during the 2017/18 period was assessed against these resource consent conditions.

Complaints and self-reported incidents

Five complaints were received during 2017/18: one regarding aluminium dross, one smoke complaint, one relating to carbon dust and two concerning alumina dust originating from the port. The Aluminium dross complaint was investigated by Environment Southland. It was found that NZAS were operating within the current resource consent conditions.

The remaining incidents were not confirmed by Environment Southland staff and were referred to NZAS on all occasions. These were investigated and responded to appropriately by NZAS staff.

15/16

16/17

17/18

Consent performance

NZAS remained compliant with consent limits during the 2017/18 period. Audit sampling of the effluent and stormwater discharges was also completed by ES with no issues.

NZAS continually provided notifications to ES during the 2017/18 period, regarding routine maintenance that may have resulted in concerns from members of the public.

15/16

16/17

17/18



Aerial view of NZAS site (Image by NZAS)

2.4.2 Dongwha New Zealand Limited/Daiken Southland Limited

Consents

Daiken Southland Ltd holds 11 resource consents. Of these, six are discharge consents, as follows:

- discharge of contaminants to air from fibreboard processing, including the treatment of wastewater;
- discharge of effluent and treatment pond seepage to land;
- discharge of untreated stormwater and treated wastewater to water;
- discharge of stormwater to land;
- discharge from a tile drain to a watercourse;
- discharge of ash to land.

Dongwha NZ Ltd operated the mixed density fibreboard (MDF) manufacturing plant, located south of the Matura township, in 2017 and early 2018. In May 2018, all resource consents were transferred to Daiken Southland Ltd, with the sale and purchase of the MDF plant.

What do we look at?

Daiken Southland are authorised to discharge stormwater and treated wastewater to water and land. Consents are also held for the discharge of contaminants to air and ash to land at this site. Compliance during the 2017/18 period was assessed against these resource consent conditions.

Complaints and self-reported incidents

No complaints or self-notifications were received during the 2017/18 period. A total of 28 minor environmental incidents occurred onsite and were summarised in the annual report. These were dealt with by onsite staff and did not require reporting to ES at the time.

15/16

16/17

17/18

Consent performance

Dongwha NZ Limited was compliant with all monitored consent conditions for the 2017/18 period. All wastewater was discharged to land during the period and stormwater and wastewater results were compliant. All formaldehyde and particulate emissions remained significantly lower than consented limits. A new consent was granted in June 2018 to discharge ash to land.

15/16

16/17

17/18



Aerial view of Daiken Southland site (Image by Daiken Southland Ltd)

2.5 Fertiliser Industry

2.5.1 Ballance Agri-Nutrients Limited

Consents

Ballance Agri-Nutrients Limited holds three resource consents for its fertiliser manufacturing plant at Awarua.

They are:

- to discharge stormwater from a fertiliser manufacturing facility to water;
- to take groundwater for fertiliser processing;
- to discharge contaminants to air from the manufacture of fertiliser and associated activities.

Ballance Agri-Nutrients Limited operates a fertiliser manufacturing facility at Awarua, to the south of Invercargill.

What do we look at?

Ballance Agri-Nutrients Limited holds three resource consents. The consents permit the taking of groundwater, the discharge of stormwater, and the discharge to air from its fertiliser manufacturing plant. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

A complaint was received regarding the tracking of fertiliser onto the road from the Ballance Agri-Nutrients Plant. This incident was not related to the Ballance consents.

15/16

16/17

17/18

Consent performance

Ballance Agri-Nutrients was fully compliant with all of their consent conditions for the 2017/2018 reporting period.

15/16

16/17

17/18

2.5.2 Ravensdown Fertiliser Co-operative Limited

Consents

Ravensdown Fertiliser Co-operative Limited holds two resource consents for the purpose of operating a limestone quarry at its Dipton site. They are:

- to discharge treated stormwater to water;
- to discharge contaminants to air from limestone crushing, drying and handling

The company holds one resource consent for its Balfour site, which is:

- to discharge stormwater from a limestone quarry.

Ravensdown Fertiliser Co-operative Limited operates one limestone quarry in Southland at Dipton and a wholesale outlet at Balfour.

What do we look at?

Ravensdown holds three resource consents which cover the operations at their two sites. The consents permit the discharge to air, and the discharge of stormwater from its quarries. Compliance is assessed against these resource consents.

Complaints and self-reported incidents			
A complaint was received regarding an odour believed to have originated from the Ravensdown Bluff Urea Store. Ravensdown investigated and the odour was traced back to a spill that occurred during the transport of urea from the port. The spilt material was cleaned up, and improvements were planned for the site. This incident was not related to the Ravensdown consents.	15/16	16/17	17/18

Consent performance			
The Ravensdown sites at Dipton and Balfour were compliant with all of their consent conditions for the 2017/2018 reporting period.	15/16	16/17	17/18

2.6 Mining Industry

2.6.1 Greenbriar Limited

What do we look at?

The consents held for the Greenbriar Ltd mines authorise the discharge of treated mine water and stormwater to water. Consents are also held for the discharge of contaminants to air and ash to land at these mine sites. Compliance was assessed against the current resource consents.

<div style="border: 1px solid black; border-radius: 15px; padding: 10px; width: fit-content; margin: 0 auto;"> <p>Ohai Mine Site</p> </div>	<p>Consents</p> <p>Twelve resource consents are held relating to mining activities at the Ohai mine site. The primary consents include:</p> <ul style="list-style-type: none"> • discharge of contaminants to air from mining, screening and stockpiling of coal; • discharge of treated wastewater to water; • discharge of surface and groundwater; • discharge of solid waste to land; • take surface water for a mining operation; • take water and discharge water from the Ohai Number 6 mine lake into the Morley Stream.
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Complaints and self-reported incidents			
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Ohai mine during the 2017/2018 reporting period.	15/16	16/17	17/18

Consent performance summary			
<p>The Ohai Mine was substantially compliant for the 2017/18 period, with the following exceptions.</p> <p>Stormwater sampling is to occur when specific rainfall conditions are met; sampling was not completed on all occasions in 2017/18. The samples collected showed no adverse effects on Morley Stream.</p> <p>A non-compliance was also identified during an ES audit sampling in February 2018. The flocculent had not been turned on resulting in elevated turbidity in the discharge and receiving waters. Immediate action was taken and the environmental impact was minimal. All other sampling was compliant for the period.</p>	15/16	16/17	17/18

**Goodwin
and
New Vale
Mine Sites**

Consents

Seven consents are held relating to mining activities at the Goodwin and New Vale mine sites, as follows:

- discharge of treated water to the Hedgehope Stream (Goodwin);
- discharge of treated water to the Hedgehope Stream (New Vale);
- take groundwater and surface water for mining (Goodwin);
- take groundwater and surface water for mining (New Vale);
- discharge of contaminants to air;
- discharge of ash to land;
- discharge of pelt processing solids to land.

Complaints and self-reported incidents			
No complaints or self-reported environmental incidents were received by Environment Southland relating to the Goodwin and New Vale mine sites during the 2017/2018 reporting period.	15/16	16/17	17/18

Consent performance			
Consent requirements were met for the 2017/18 period, with the exception of a minor TSS exceedance in the Goodwin discharge in April 2018.	15/16	16/17	17/18
A proactive management approach was maintained onsite and no other issues were raised.			



Mining operations, New Vale Mine, Waimumu

2.6.2 Bathurst Resources Limited

Consents

Bathurst Resources Limited holds 13 consents for mining-related activities. The primary consents include:

- take groundwater and surface water for dewatering;
- discharge of stormwater to water;
- discharge of treated site water to water;
- discharge of ash from industrial operations, mixed with overburden, to land;
- discharge of contaminants to air;
- disturb the bed and divert the flow of a tributary.

Bathurst Resources Limited operates a coal mine in Nightcaps, Western Southland. During the 2017/18 period, two sites were being mined; the Coaldale Mine and the Black Diamond Mine.

What do we look at?

The Bathurst Resources Limited consents allow the discharge of treated site water to the Wairio Stream. The mine also holds consents for water abstraction, discharge of contaminants to air, and discharge of ash to land. Compliance was assessed against current resource consent conditions.

Complaints and self-reported incidents

One public complaint was received for the 2017/18 reporting period. Excessive dust was allegedly discharging from the mine site; this was not confirmed by ES staff, however, Bathurst Resources staff onsite responded immediately.	15/16	16/17	17/18
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Consent performance

Bathurst Resources Ltd was fully compliant with consent conditions for discharges to land, air and water. All results provided were compliant with consent conditions. NB. Dry conditions resulted in fewer water samples than usual.	15/16	16/17	17/18
Full compliance was achieved for two of the three water take consents, one of which was surrendered in February 2018. Three minor exceedances were reported for the Coaldale groundwater abstraction; remedial action was taken to prevent future over abstraction.			
The diversion of an unnamed tributary of the Wairio Stream was completed in July 2017, with all consent conditions met and no significant issues arising.			



Active mine pit, Bathurst Resources, Nightcaps

2.7 Sawmill Industry

There are four sawmill companies in Southland that hold resource consents for discharge purposes. They are at Otautau, Winton, Ryal Bush and Tuatapere. Their compliance performance during 2017/18 was assessed against their current resource consents.

Note: the consents for the Otautau sawmill are current but the sawmill was closed in April 2018

What do we look at?

Environment Southland inspects each site and audits the water sampling results to assess for sediment runoff and the concentrations of timber treatment metals which can be toxic to aquatic life in high concentrations.

2.7.1 Craigpine Timber Limited

Consents

Craigpine Timber Limited holds two consents related to its sawmilling operation. They are:

- to discharge contaminants to the air from timber processing activities;
- to discharge timber yard stormwater and condensate to water.

Craigpine Timber Limited operates a sawmilling and timber processing plant at Winton.

What do we look at?

Craigpine Timber holds two resource consents. These consents permit the discharge to water, and the discharge of contaminants to air from its processing activities. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

One complaint was received during the 2017/2018 reporting period. The complaint was in relation to the discolouration of the Winton Stream as a result of the discharge of stormwater from the Craigpine site. This was investigated by ES staff and was found to not be in breach of consent conditions.

15/16

16/17

17/18

Consent performance

The site was fully compliant with its consent conditions during the 2017/2018 reporting period.

15/16

16/17

17/18

2.7.2 Findlater Sawmilling

Consents

Findlater Sawmilling holds two consents related to its sawmilling operation. They are:

- to take groundwater for a sawmilling operation;
- to discharge stormwater to a wetland from a sawmilling operation.

The Findlater Sawmilling Limited operates a sawmilling plant at Tussock Creek.

What do we look at?

Findlater Sawmilling Limited holds two resource consents. The consents permit the taking of groundwater, and the discharge of stormwater from its sawmilling and timber processing operation. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

No complaints or self-reported environmental incidents were received by Environment Southland during the 2017/2018 reporting period.	15/16	16/17	17/18
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Consent performance

Findlater Sawmilling was fully compliant with all of their consent conditions for the 2017/18 reporting period.	15/16	16/17	17/18
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2.7.3 Lindsay & Dixon Limited

Consents

Lindsay & Dixon Limited holds one discharge consent related to its sawmilling operation.

This is:

- to discharge stormwater, boiler blow-down water and sludge to land and to water

Lindsay & Dixon Limited operates a sawmilling plant at Tuatapere.

What we look at

Lindsay & Dixon Limited holds one consent. The consent permits the discharge of stormwater to water from its sawmilling and timber processing site. Compliance is assessed against this resource consent.

Complaints and self-reported incidents

No complaints or self-reported environmental incidents were received by Environment Southland during the 2017/2018 reporting period.	15/16	16/17	17/18
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Consent performance

Monitoring results were fully compliant with the conditions of the consent.	15/16	16/17	17/18
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3.0 Sewage Treatment Systems

3.1 Invercargill City Council

Consents

The Invercargill City Council holds eight discharge consents relating to its sewage treatment plants. These include consents to:

- discharge treated wastewater to an estuary;
- discharge treated wastewater to coastal water;
- discharge contaminants to land;
- discharge biosolids to land;
- discharge stormwater and wastewater to land.

Sewage treatment systems

The Invercargill City Council (ICC) operates wastewater treatment plants at three locations: Bluff, Clifton (south Invercargill), and Omaui.

What do we look at?

The ICC holds resource consents for discharging treated wastewater, discharging biosolids (dried sludge from the wastewater treatment process), waste, leachate, and filter backwash to land. Compliance is assessed against these resource consents.

Complaints and self-reported incidents

One complaint was received regarding an odour believed to be originating from the Clifton wastewater treatment plant. The odour was not confirmed by ES staff to be present at the time of the investigation. However, City Council staff identified an area where odours could potentially originate and put measures in place to prevent any occurrence.

Consent performance summary

Bluff Wastewater			
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

Invercargill Wastewater			
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

Omaui Wastewater			
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

Biosolids to land, Station Road			
There was no discharge of biosolids to the disposal area during the reporting period. Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

Biosolids to land, Christies Track			
There was no discharge of biosolids to the disposal area during the reporting period. Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

Stormwater

The Invercargill City Council holds resource consent to discharge to water from its reticulated stormwater network. The consent permits the discharge of water, stormwater, and contaminants to water. Compliance is assessed against this resource consent.

Complaints and self-reported incidents

A total of 28 incidents were reported to Environment Southland which were reported to have possible links to the Invercargill City Council stormwater network and the subsequent discharge to a waterway. These included:

- dead fish in a waterway due to low flow conditions
- runoff water and foam from firefighting activities entering the stormwater network
- discolouration in a river caused by dye discharges
- contamination resulting from oil and diesel spills
- contamination resulting from residential drainage and plumbing issues
- car washing detergent in a waterway
- sediment runoff from work being undertaken along the roadside
- effluent from a stock truck spilling to the roadside curb and channelling
- discharges from commercial and industrial premises
- sewerage blockages resulting in overflows

On all occasions staff from the Invercargill City Council investigated and took appropriate action to mitigate the issues associated with the discharges.

Complaints and self-reported incidents	
28 incidents were reported to Environment Southland. These were all investigated. Investigation is on-going with some of the incidents.	17/18

Consent Performance	
The ICC was in breach of the discharge conditions of its consent due to the confirmed discharge of sewage to the stormwater network.	17/18

Water abstraction

The Invercargill City Council operates the water treatment plant at Branxholme, where water from the Oreti River is treated for supply to Invercargill and Bluff. The City Council holds two resource consents relating to the operation of the plant. The consents permit the taking of water, and the discharge of filter backwash water to land and water.

Complaints and Self-reported Incidents

There were no complaints or self-reported incidents for the 2017/2018 reporting period.

Consent Performance			
Full compliance was achieved with all of the monitoring and reporting requirements of the consents.	15/16	16/17	17/18

3.2 Southland District Council

Consents

The Southland District Council holds 35 discharge consents, including consents to:

- discharge processed wastewater to land;
- discharge processed wastewater to water;
- discharge processed wastewater to coastal water;
- discharge contaminates to air from wastewater treatment.

Sewage treatment systems

The Southland District Council (SDC) holds resource consents for the purpose of treating and discharging sewage at 19 locations within the Southland region. The compliance performance during 2017/18 was assessed against current resource consents.

What do we look at?

The quantity of water being discharged and quality of the effluent and receiving waters are assessed.

The quantity of water discharged is referred to as “discharge flows”. Discharge flows are the amount of sewage and wastewater either entering or leaving the sewage treatment system. All exceedances of discharge flows correspond to periods of high rainfall. This indicates that there is stormwater entering the sewage systems. Therefore, although the discharge flows have increased, the discharge is likely to be more dilute than normal due to mixing with rainwater.

Complaints and self-reported incidents

A total of 21 incidents were reported to Environment Southland with respect to the sewage treatment systems. These ranged from sewage spills and odour to drainage work.

The substantial incidents that were confirmed were:

- ponded sewage flowing beyond the consented irrigation area at Otautau;
- discharge of sewage to water at Tokonui from a burst sewerage pipe;
- discharge of sediment to a waterway from the Riverton Water Treatment Plant settling pond;
- sludge disposed of in SDC owned gravel pit.

These incidents were investigated and appropriate action taken.

Other confirmed incidents included; one confirmed odour from the Te Anau Oxidation Pond, small manhole overflows to land in Te Anau and Tuatapere and a minor overflow from a public toilet.

The remaining incidents related to permitted activities. No breach of plans or rules was established, the reported incident was not confirmed or if it was confirmed it had no measureable environmental effect.

Consent performance summary

Balfour

One round of sampling was not undertaken. The maximum cBOD ₅ and TSS limits for the discharge were exceeded on one occasion. On this occasion the ammoniacal nitrogen concentration in the receiving waters also exceeded the consent limit. The mean discharge cBOD ₅ and TSS limits were also exceeded on a second occasion.	15/16	16/17	17/18
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Browns			
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.	15/16	16/17	17/18

Curio Bay			
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.	16/17	17/18	

Edendale/Wyndham			
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment. The annual average daily discharge flow exceeded the consent limit, however the maximum discharge flow limit was achieved.	15/16	16/17	17/18

Gorge Road			
Full compliance was achieved with respect to the effluent quality and impact on the receiving environment.	15/16	16/17	17/18

Lumsden			
Full compliance was achieved with respect to effluent quality. Full compliance was also achieved with consented dry weather flow limits.	15/16	16/17	17/18

Manapouri			
Compliance was achieved with respect to consented effluent quality and receiving water limits.	15/16	16/17	17/18

Monowai			
The consented discharge faecal coliform criterion was exceeded on one monitoring occasion. Compliance was achieved with all other consented limits and monitoring requirements.	15/16	16/17	17/18

Nightcaps			
The faecal coliform, dissolved oxygen, ammoniacal nitrogen and clarity limits in the receiving waters were exceeded on one occasion. The receiving water faecal coliform limit was also exceeded on one other occasion.	15/16	16/17	17/18

The discharge quality and discharge flow limits were fully complied with.			
Ohai			
Full compliance was achieved with respect to all discharge and receiving water consent limits.	15/16	16/17	17/18
Otautau			
Compliance was achieved with respect to consented effluent quality limits, discharge flows and reporting requirements. Ponded sewage was accidentally discharged beyond the consented disposal area on one occasion.	15/16	16/17	17/18
Riversdale			
Full compliance was achieved with respect to all discharge flows and receiving water consent limits.	15/16	16/17	17/18
Riverton Rocks			
Compliance was achieved with respect to consented effluent quality, discharge flows limits and reporting requirements.	15/16	16/17	17/18
Riverton Township			
Compliance was achieved with respect to consented effluent quality, discharge flows limits and reporting requirements.	15/16	16/17	17/18
Stewart Island			
The DIN limit was exceeded on four occasions. Compliance was achieved with respect to the remaining consented limits and monitoring requirements.	15/16	16/17	17/18
Te Anau – discharge to land and water			
Compliance was achieved with respect to the “discharge to water” consented limits and monitoring requirements. However, the consented average monthly discharge flow limit was breached on 5 occasions.	15/16	16/17	17/18
Te Anau – Discharge to Air			
Four complaints were made from the public relating to objectionable odour from the oxidation ponds on 24/11/17. These were confirmed by SDC. One further complaint regarding odour was made 12/2/18, however the presence of an objectionable odour was not confirmed at the time of the investigation.		16/17	17/18
Tokanui			
Compliance was achieved with respect to consented effluent quality limits and reporting requirements. However, the maximum daily wastewater flow limit was exceeded on 10 occasions.	15/16	16/17	17/18
Tuatapere			

Compliance was achieved with respect to consented effluent quality and discharge flow limits. One receiving water result for dissolved oxygen result was marginally lower than the consented limit. All other results were fully compliant with the consent limits.	15/16	16/17	17/18
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Winton			
Full compliance was achieved with respect to all discharge and receiving water consent limits.	15/16	16/17	17/18

Water abstraction

The Southland District Council holds 23 resource consents to abstract groundwater and surface water for community and rural water supply. This includes emergency takes to supplement urban supply.

Complaints and Self-reported Incidents

There were no complaints or self-reported incidents relating to the SDC water take consents for the 2017/18 period.

Consent performance summary

SDC has 23 consented water takes to take water for the townships and rural communities in Southland.

- 18 were fully compliant with the abstraction limit,
- 4 water takes; Five Rivers, Takitimu/Mt York, Otautau and Tuatapere had the occasional over abstraction (5, 7, 14 & 9 times respectively) while,
- 1 water take; Eastern Bush/Otahu Flat was in breach of the abstraction limit for approximately one third of the reporting period.

Stormwater

Complaints and self-reported incidents

One complaint relating to stormwater was received by Environment Southland during the 2017/2018 period. This complaint related to oil discharging from the SDC stormwater network in Winton. This incident is currently being investigated.

Consent performance summary

One stormwater consent was granted in March 2018. The consent related to stormwater discharges from Balfour, Browns, Lumsden, Mossburn, Riversdale, Tokanui and Waikaka. Monitoring on this consent is not required till the 2018/2019 period.

The remaining stormwater consents were granted in the 2018/2019 and will be discussed in the 2018/2019 report.

3.3 Gore District Council

Sewage treatment systems

The Gore District Council (GDC) holds five resource consents relating to their sewage treatment facilities. The compliance performance during 2017/18 was assessed against the current resource consents.

Consents

As follows, the Gore District Council holds five resource consents relating to sewage treatment:

- discharge of treated wastewater from the Mataura Township;
- discharge of treated wastewater from the Gore Township;
- discharge of treated wastewater at Waikaka;
- discharge of contaminants to air from the Gore Wastewater Treatment System;
- construct a wastewater reactor clarifier and waste activated sludge tank.

What do we look at?

As part of the consent requirements for Gore District Council, the quantity of water being discharged and the quality of the wastewater and receiving waters are assessed.

Complaints and self-reported incidents

Four complaints were received during the 2017/18 period, relating to the sewage treatment systems. Three concerns were raised with the Gore oxidation ponds and associated discharges; these were investigated and no breach of resource consent or plan rules was identified on any occasion. A sewage discharge was self-reported as a result of an accident at the Ajax pump station; this was responded to by GDC and was not attended by ES.

Consent performance summary

Gore			
The BOD ₅ , TSS and <i>E.coli</i> limits and rolling percentiles for the pond discharge were exceeded on several occasions during the 2017/18 period. The correct procedure was followed in response and no impact on the receiving waters was identified. One routine sample was not collected during the period.	15/16	16/17	17/18
Macroinvertebrate and periphyton monitoring was completed as per the consent conditions. Concerns were raised with the macroinvertebrate community health downstream of the discharge; this is being followed up with GDC.			

Mataura			
All sample results were compliant for the 2017/18 period, however, discharge and receiving water sampling was not completed at the required frequency. Several samples were missed due to a miscommunication between GDC staff members. Macroinvertebrate and periphyton monitoring was completed as per the consent conditions and no issues were raised.	15/16	16/17	17/18

Waikaka			
All discharge and receiving water monitoring was compliant for the 2017/18 period. However, discharge flow rates were non-compliant on several occasions during the reported period. This investigation is ongoing.	15/16	16/17	17/18

Stormwater networks

The Gore District Council holds three resource consents to discharge stormwater. These consents cover the Gore, Mataura and Pukerau/Waikaka townships. An additional consent is held for the dewatering of a construction area in Gore.

Consents
<p>The Gore District Council holds four stormwater resource consents, as follows:</p> <ul style="list-style-type: none"> • discharge of stormwater to water for Gore Township; • discharge of stormwater to water for Mataura Township; • discharge of stormwater to water for Pukerau and Waikaka Townships; • discharge of water from dewatering of a construction area in Gore Township.

Complaints and self-reported incidents

Three complaints were received during the 2017/18 period, relating to oil discharges from the Gore stormwater network. These were not confirmed by ES and were referred to GDC for investigation.

Consent performance summary

During the 2017/18 period, routine stormwater sampling was completed on three occasions across the four stormwater networks (two dry weather samples and one wet weather sample). Additional sampling was also completed on three occasions in response to *E.coli* exceedances. At the time of writing this report, the final wet weather sample had not yet been taken due to unfavourable climatic conditions. An extension was granted by ES and this was to be completed at the next suitable opportunity. Audit sampling was completed by ES in April 2018 and no issues were raised.

Water abstraction

The Gore District Council holds 11 resource consents to abstract groundwater and surface water for industrial and community water supply. This includes emergency takes to supplement urban supply.

Complaints and Self-reported Incidents

There were no complaints or self-reported incidents relating to the GDC water take consents for the 2017/18 period.

Consent performance summary

All water abstraction limits were adhered to during the 2017/18 period. Conservation measures were implemented when required and supplementary water takes were exercised at Jacobstown, Coopers Well and Waikaka Stream this year.

4.0 Quarrying

4.1 Gravel extraction

The Resource Management Act 1991 and/or a rule in a Council plan require that a resource consent is required to disturb the bed of a river.

Environment Southland currently has 126 land use consents to extract gravel from Southland rivers. During the 2017/18 financial year Environment Southland granted 13 new consents / consent renewals to extract up to a total of 311,866 m³ gravel.

Environment Southland catchment staff regularly inspect the land use consents checking to ensure that the operation of the consent and the volume of gravel taken have been completed in accordance with the consent conditions. Overall compliance has been very good.



Gravel extraction on the Aparima River

5.0 Landfills

5.1 S J Timpany Cleanfill

Consents

S J Timpany Contracting holds two resource consents, as follows:

- discharge of cleanfill and solid waste to land;
- discharge of contaminants to air from the burning of vegetation.

S J Timpany Contracting operates a cleanfill and a limited-scope landfill at Otatara, accepting solid waste from the demolition of housing and commercial buildings, asbestos and some contaminated soils. The site also has a holding pad which allows for sample testing of contaminated soils and encapsulation of contaminants prior to discharge.

What do we look at?

S J Timpany Contracting has two consents to discharge. Compliance is assessed against the current resource consent for discharge of solid waste to land with groundwater sampling conducted to assess potential contamination.

Complaints and self-reported incidents

No complaints or self-reported environmental incidents were received by Environment Southland relating to the S J Timpany Contracting Cleanfill and limited scope Landfill site during the 2017/2018 reporting period.

15/16

16/17

17/18

Consent performance

S J Timpany Contracting was substantially compliant for the 2017/18 reporting period. Some issues were raised with the lack of detail provided in the annual report; additional information was given on request and this will continue to be followed up in 2019.

15/16

16/17

17/18

No issues were raised during ES sampling and inspections in 2017/18.

5.2 AB Lime Landfill

Consents

AB Lime Limited holds six resource consents relating to the landfill, as follows:

- discharge of solid waste onto or into land;
- discharge of contaminants to air from a landfill;
- discharge of stormwater to a tributary of the Lochiel Stream;
- take 40 cubic metres of groundwater;
- take 500 cubic metres of surface water;
- dam and divert surface water.

AB Lime Limited operates an agricultural fertiliser and lime business, and a Class A landfill business approximately 4km east of the Winton Township. This section focuses predominantly on the landfill.

What do we look at?

AB Lime holds six consents to operate the landfill. Compliance was assessed against current resource consent conditions.

Complaints and self-reported incidents

Complaints and self-reported incidents			
A total of 26 complaints were received from members of the public relating to suspected odours originating from the AB Lime landfill in 2017/18. Four of these complaints were confirmed by ES and enforcement action is ongoing. AB Lime was very proactive in responding to these complaints and various remedial measures have been implemented in attempt to address the odour issues.	15/16	16/17	17/18

Air discharge consent performance	
Ongoing issues were reported with gas flare temperatures up until November 2017. Additional gas wells were drilled and temperatures were compliant for the remainder of the 2017/18 period.	17/18
The air discharge consent was also breached on several occasions during the 2017/18 period due to the aforementioned odour issues.	

Consent performance summary

Note: not all data for the 2017/18 period had been reviewed at the time of writing this report. This included the annual air discharge report.

Consent performance

Overall, compliance was achieved for all other consents and AB Lime continued to be proactive in communicating with Environment Southland. Some trigger level exceedances were reported for groundwater and surface water quality monitoring, however, these were investigated and no further action was deemed necessary.

A peer review inspection was completed in April 2018 with consulting engineer John Cocks, Environment Southland and AB Lime Ltd. No major design or construction matters required review in the 2017/18 period. Four new gas wells were installed in accordance with best practice and no issues were raised by the Peer Reviewer.

15/16

16/17

17/18



View across areas 13 and 14 of the active landfill, AB Lime

6.0 Coastal Marine Area

6.1 South Port and New Zealand Aluminium Smelter Limited's Coastal Plan Agreements

The two main port facilities in Southland operate out of Bluff.



South Port services and manages Southland's import and export industries including aluminium, timber, fisheries, dairy, meat, wood chips, stock food, cement, alumina, fertiliser and petroleum products.

New Zealand Aluminium Smelters (NZAS) services and manages the import and export operations of aluminium and aluminium based product based on the Tiwai Peninsula.

Activities on these sites are managed by means of individual agreements. The agreements describe a series of systems which each party has agreed to, ensuring the management of port activities are compliant with the Resource Management Act 1991.

South Port

This year South Port undertook a significant upgrade of the log storage area on the island harbour. The upgrade involved the asphaltting of the previously gravelled hardstand area. Due to the impervious nature of the asphalt the size of the stormwater pipes were increased to cope with the increased hydraulic loading placed on the system and primary storm traps and a secondary treatment system were installed to improve the quality of the stormwater being discharged to the harbour.

Incidents Reported

South Port

One complaint was reported to Environment Southland which may have been linked to activities at the port. The complainant reported the presence of palm kernel floating in Bluff harbour. The report was received 2 days after the observation was made, therefore the presence of palm kernel was unable to be confirmed.

NZAS Wharf

Two incidents were received by Environment Southland reporting the discharge of alumina dust originating from a vessel berthed at the NZAS wharf facility.

- One incident was confirmed and found to be the results of an equipment malfunction. The unloading process was modified to mitigate the loss of dust to the environment
- One incident was not confirmed, but staff on the NZAS wharf investigated the incident.

6.2 Whitebait stands

Environment Southland is responsible for whitebait stands under the Regional Coastal Plan, and undertakes an annual inspection of these each year. Huts associated with the stands are controlled by the Southland District Council, while the Department of Conservation controls the fishing of whitebait.

The Coastal Plan has set the maximum number of whitebait stands allowed in Southland at those that were occupied at 15 February 1997. Any new whitebait stands are prohibited.

In 2014/15 Environment Southland began removing illegal stands that had been identified from the previous year's inspections. During the inspections, additional illegal stands were located and notification was left attached to these stands for the owners to contact Environment Southland.

Whitebait stands were inspected for compliance with common conditions such as each stand displaying a unique number, being a certain length and in good repair. Inspections are completed midseason, which allows owners additional time for repairs. As in previous years there was a high level of compliance with these consents.

Although most of the whitebait stands in Southland are permanent structures, stands in Fiordland have to be removed each season. These whitebait stands were also inspected at the end of the season to ensure the conditions were being met.

7.0 Tourism

7.1 Coastal surface water activities in Fiordland

Consents

DOC holds resource consents for the following purposes:

- Coastal: 11
- Discharge: 15
- Land Use: 8
- Water: 10

The Department of Conservation (DOC) holds 44 current resource consents, however, a number of these consents do not have inspection or monitoring requirements.

Note: 1080 discharges no longer require resource consent.

What do we look at?

A total of 12 DOC resource consents require routine monitoring or inspections. These consents relate to water takes and wastewater discharges associated with the DOC huts on the Milford, Kepler and Routeburn Tracks. Additional huts and facilities are also located at Martins Bay, Anchor Island and West Arm, Lake Manapouri.

Complaints and self-reported incidents

One self-notification was received in 2017/18 regarding a ruptured septic tank at Moturau Hut; the spill was dealt with appropriately by DOC staff and was followed-up by ES during the three-yearly track inspection in March 2018.	15/16	16/17	17/18
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Consent performance

• Clinton Hut <i>Abatement Notice issued for expired discharge and water permits</i>	15/16	16/17	17/18
• Mintaro Hut <i>Abatement Notice issued for expired discharge and water permits</i>	15/16	16/17	17/18
• Dumpling Hut <i>Abatement Notice issued for expired discharge and water permits</i>	15/16	16/17	17/18
• Sandfly Point Hut <i>Full compliance</i>	15/16	16/17	17/18
• Luxmore Hut <i>Water abstraction limits exceeded for several months</i>	15/16	16/17	17/18
• Iris Burn Hut <i>Abatement Notice issued for expired discharge and water permits</i>	15/16	16/17	17/18
• Moturau Hut <i>Client inspections and report did not meet consent conditions</i>	15/16	16/17	17/18

Consent performance			
<ul style="list-style-type: none"> Lake McKenzie Hut <i>Abatement Notice issued for expired discharge and water permits</i> 	15/16	16/17	17/18
<ul style="list-style-type: none"> Howden Hut <i>Abatement Notice issued for expired discharge and water permits</i> 	15/16	16/17	17/18
<ul style="list-style-type: none"> Martins Bay Hut <i>Full compliance</i> 	15/16	16/17	17/18
<ul style="list-style-type: none"> Anchor Island <i>Abstraction rates not being recorded or submitted</i> 	15/16	16/17	17/18
<ul style="list-style-type: none"> West Arm, Manapouri <i>Monitoring data not submitted</i> 	15/16	16/17	17/18

Environment Southland inspections

Environment Southland inspects the Routeburn, Milford and Kepler Tracks every three years. This includes an inspection of the sewage disposal systems at the huts, water takes for the huts, and several toilets and shelters along the tracks. These inspections were completed in 2017/18 as follows.

Consent Inspections	
<ul style="list-style-type: none"> Routeburn Track (December 2017) <i>Full compliance was recorded for all facilities on this track. NB. Only facilities in the Southland region were inspected.</i> 	17/18
<ul style="list-style-type: none"> Milford Track (February 2018) <i>Full compliance was recorded for all facilities on this track. Some recommendations were made to ensure all systems were operating as efficiently as possible.</i> 	17/18
<ul style="list-style-type: none"> Kepler Track (March 2018) <i>Full compliance was recorded for all facilities on this track, with the exception of the Luxmore Hut. Evidence of overland flow, discolouration of vegetation and odour was observed in the Luxmore disposal field.</i> 	17/18



Mackinnon Pass Shelter, Milford Track

7.2 Coastal surface water activities in Fiordland

Consents

Milford Sound Tourism holds 13 resource consents. The primary consents include:

- discharge treated wastewater to groundwater at Knobs Flat;
- discharge treated wastewater to water at Deepwater Basin;
- discharge water to water from a hydro-electric power scheme;
- carry out maintenance dredging in Freshwater Basin.

Milford Sound Tourism (MST) is the primary infrastructure provider in Milford Sound. MST own and operate the harbour, wharves and visitor terminal. They also operate the wastewater treatment facilities at Milford Sound and at Knobs Flat.

What do we look at?

A total of five resource consents require routine monitoring or inspections. These consents relate to the wastewater discharges, hydro-electric generation, maintenance dredging and structures. Compliance during the 2017/18 period was assessed against these resource consent conditions.

NB. Compliance has only been recorded for the 2017/18 period as MST is new to this report.

Complaints and self-reported incidents

No complaints or self-notifications were received during the 2017/18 period.

17/18

Consent performance

Compliance issues have been ongoing at the Knobs Flat wastewater treatment site during 2017/18. In response, the sampling frequency has been increased and a second UV treatment system is to be implemented. Significant upgrades to the treatment and disposal system are planned, and MST is in the process of applying for new resource consents.

Sample results showed full compliance at the Milford wastewater treatment plant. Some results and discharge volumes were supplied late.

Site inspections were completed at all sites in November 2017 and no issues were raised. MST has actively responded to the issues raised and communication with ES is continual.

17/18



Milford Sound Wastewater Treatment Plant

7.3 Coastal surface water activities in Fiordland

Coastal permits are required for undertaking commercial surface water activities in Fiordland. Environment Southland is responsible for ensuring compliance with coastal permits issued under the Regional Coastal Plan for Southland and Resource Management Act 1991.

Compliance in the Fiordland Marine Area is predominantly assessed by monitoring surface water activity logs. A high level of compliance was achieved by most consent holders during 2017/18, however, issues were raised with a small number of operators. This primarily included operators not supplying logs, submitting incomplete logs, and providing logs outside of the required timeframes. A small number were also found to be operating outside of their consented limits, that is, exceeding the allowed frequencies in certain areas. Letters were sent to these operators, and further action may be considered if continual non-compliance occurs.

In December 2017 and April 2018, on-water patrols were conducted to assess compliance from consent holders, recreational users and commercial users of the marine environment. These patrols were completed in lower Fiordland, and included assessments from Preservation Inlet to Deep Cove. These are multi-agency expeditions with Environment Southland Compliance, Environment Southland Biosecurity, Ministry for Primary Industries and the Department of Conservation.

In December 2017, a total of 13 coastal permits were physically checked. This included barges, structures, commercial vessels and the Kisbee Lodge. Several other non-commercial vessels and moorings/buoys were also inspected. All commercial vessels were operating in compliance with resource consent conditions. Hull inspections were completed by Environment Southland Biosecurity, and Education was provided from various agencies on hunting permits, fishing regulations and clean vessel passes. One issue was raised regarding a structure number on a barge.

In April 2018, a total of 18 coastal permits were physically checked. This again included barges, structures, commercial vessels and the Kisbee Lodge. A higher number of commercial and non-commercial vessels (30 in total) were boarded during this trip due to the time of year. All commercial vessels were operating in compliance

with resource consent conditions and education was provided from the various agencies on-board regarding hunting permits, fishing regulations, and clean vessel passes. A small number of structures were found without the correct identification, and the Compliance team are currently investigating incidents relating to an unconsented mooring and a barge which is potentially operating outside of consent conditions.



Mooring inspections being completed during the April 2018 patrol

Part B

Incident Response

8.0 Incidents

Compliance officers respond to reports of pollution that come in via our 24-hour pollution hotline (0800 76 88 45).

This year there was a marked increase of incidents reported to the compliance division. In the 2017/18 year there were 961 incidents reported in total (742 public, 219 staff), this is a 34% increase in the 2017/18 year.

This increase is partly due to a programme of issuing abatement notices for activities that are not acting lawfully due the consent expiring, a hot summer and an increase in air related complaints in May.

The costs involved in attending and investigating an incident are charged where an offending party can be identified. Unfortunately many of the incidents attended do not identify the offending party. In these cases where mitigation action has to be taken to cease an environmental effect such as the removal of litter, rubbish and dead stock from waterways the cost of such action is met by the rate payer.

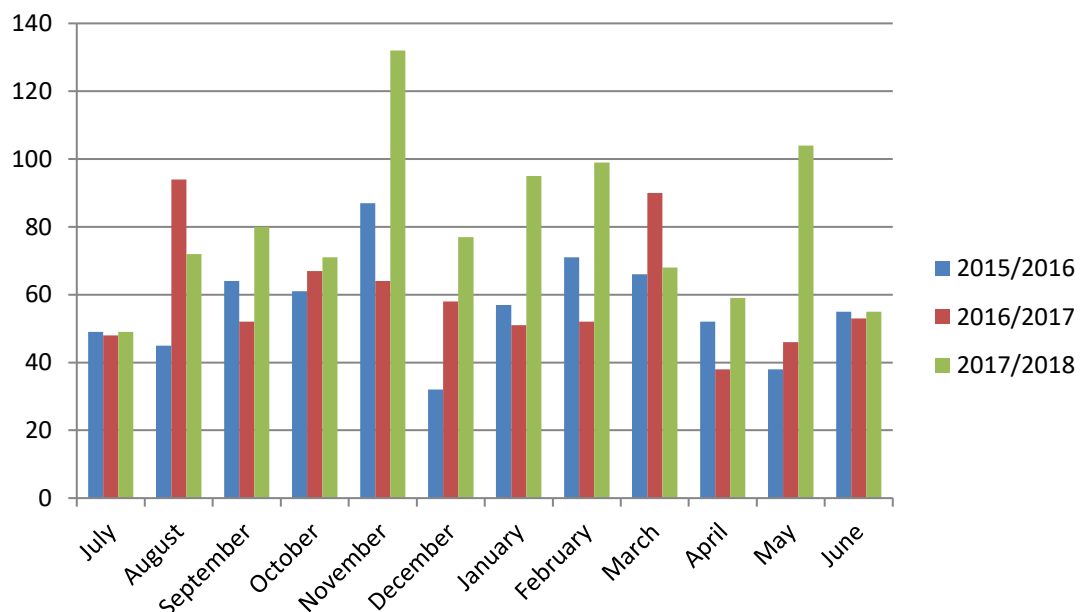


Figure 6 - Reported incidents per month compared over three years

The variety of incidents reported to the compliance division can be extremely wide and covers all manner of environmental incidents. A lot of incidents are reasonably rudimentary and can be completed in a short time frame. There are some incidents that can start major investigations that have taken months to arrive at a resolution.

As can be seen in the above graph the numbers of incidents have increase in the 2017/18 year. However, it appears that the increase in air complaints in May is due to a reducing tolerance for nuisance smoke and odour.

Priority of Incidents

Not all incidents are created equal, the initial incident is assigned a priority from High (1 to 24hours), Medium (2 days to 4 weeks) Low (1 Month to 6 months). The priority is determined high to low initially based on the impacts to the environment and/or the community. Priorities can also be determined taking into account several factors including the need for rapid evidence collection, the receiving environment and time of day.

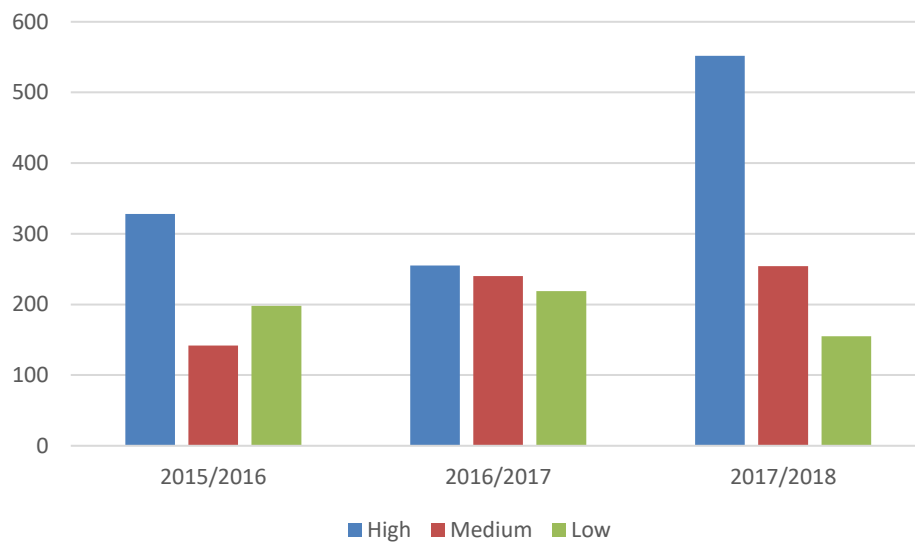


Figure 7 - Priority response category compared to previous years

There has been a significant increase in the number of high priority incidents, this is attributed to a more air related complaints.

Air such as odour, dust and smoke can have short lived effects due to the changeable nature of winds and environmental conditions. For this reason air related incidents normally attract a high priority rating.

The subsequent increase in high priority incidents normally translates into increased demand on officer time as the incident is attended within an hour and cannot be attended the next time an officer is in the area.

Part C

Enforcement

9.0 Enforcement

Environment Southland has developed an Enforcement Policy that is available to view on our website:

<https://www.es.govt.nz/Document%20Library/Plans,%20policies%20and%20strategies/Council%20policies/ES%20Compliance%20Policies.pdf>

This policy highlights the method that Environment Southland will use when considering and completing enforcement action against a person, company, or organisation.

9.1 Letters of Direction and Warnings

When enforcement action is believed to be necessary the compliance division use the most appropriate tool for the given situation. Enforcement action can be a directive action. Letters of Direction, Warnings, Abatement Notices and Enforcement Orders are all considered to be directive forms of enforcement.

A letter of direction is used in a minor to moderate situation with a cooperative, motivated party. It is designed to prevent further breaches, or to remedy or mitigate the effects of non-compliance. Normally the letter will give timelines and what action should be taken or ceased.

A formal warning is a written warning to a person or company that has committed an offence. No further action will be taken in respect of the breach, but it will form part of the history of non-compliance. Normally a formal warning will be given in a minor to moderate incident.

During the 2017/2018 year, the compliance division issued 25 Letters of Direction and issued 24 Formal Warnings.

9.2 Abatement notices

An abatement Notice requires an offender to comply with the notice within a specified timeframe. Non-compliance with an abatement notice is an offence under the Resource Management Act 1991 and can receive infringement fines or prosecution.

This is when an activity has been identified as being, or likely to be, harmful for the environment. The abatement notice requires that the activity is stopped before it starts, or is stopped from continuing, or has someone take action to correct the harmful effects.

They are issued to people or organisations that breach a rule in the Act, any regulation, or a condition of resource consent. Unlike enforcement orders they are issued by compliance officers and do not require an application to be made to the Environment Court.

During the 2017/2018 year, the Compliance Division issued 93 Abatement Notices.

9.3 Enforcement Orders

An enforcement order is another way of getting someone to comply with the Resource Management Act. It is similar in some respects to an abatement notice, in that it is used to get someone to start or stop doing something.

However, it differs from an abatement notice in that anybody (not just the council) can apply for an enforcement order against somebody else. These are issued by the Environment Court rather than the council.

Enforcement orders offer more options than an abatement notice, including the ability to recover clean-up costs in avoiding, remedying or mitigating any adverse effect on the environment.

The court may also order restoration of a natural or physical resource. If the order is not complied with, council may go ahead and comply on the respondent's behalf (and recover the cost of doing so).

Enforcement orders can be issued at sentencing or can be order prior to enforcement action being taken or alternatively as a sole form of enforcement action.

If a problem or the options to resolve it are complex, enforcement proceedings provide a court-supervised procedure for bringing about a conclusion, and if problems are encountered during the implementation of the solution, direction can be sought from the court.

The following enforcement orders were applied for and granted during the 2017/2018 year.

Wendon Creek Cattle Co Ltd:

As part of sentencing the district court issued an enforcement order to Wendon Cattle Creek requiring them to modify effluent Storage, make donations to charities and reimburse council for investigation costs

Benlyon Ltd, Vendale Ltd & Allan Baird

As part of sentencing the district court issued an enforcement order to Benlyon Ltd, Vendale Ltd & Allan Baird requiring building of a peak flow control structure, donation to effluent spill poster project and reimburse council for investigation costs.

Normac Ag Ltd

Normac Ag Ltd were issued a stand-alone enforcement order requiring the remediation of earthworks including re-establishment of wetlands to the property

9.4 Infringement Notices

An infringement notice can be issued to an individual or company that has committed an RMA offence. The infringement fine is \$300, \$500, \$750 or \$1000, and if not paid in certain timeframes, will be sent to the Ministry of Justice for fine collection (where further fees are likely to be added).

Infringements can be appealed, information on how to make an appeal is found on the back of each infringement notice, and can be explained by staff.

There were 36 infringement notices issued for the 2017/18 year, a slight increase on the previous year.

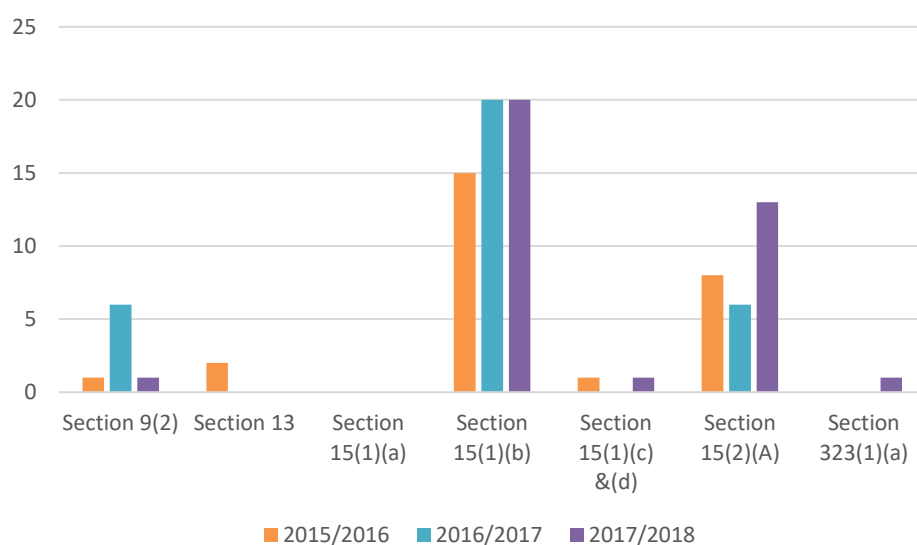


Figure 8 – Infringement notices issued in recent years

Section 9	Restrictions on use of land
Section 13	Restriction on certain uses of beds of lakes and rivers
Section 15 (1)(a)	Discharge of contaminant or water into water
Section 15(1)(b)	Discharge of contaminant onto or into land in circumstances which may result in that contaminant entering water
Section 15 (1)(c) & (d)	Contaminant from any industrial or trade premises into air; or Contaminant from any industrial or trade premises onto or into land
Section 15(2A)	Discharge of a contaminant into the air, or into or onto land, from a place or any other source, whether moveable or not, in a manner that contravenes a regional rule
Section 323(a)	Breach of an Abatement Notice

9.5 Alternative Enforcement Action

Environment Southland has developed a diversion policy to ensure that there is an alternative course of action other than prosecution in special circumstances.

Diversion has three primary purposes being rehabilitation; reparation and restoration; and ensuring that the Council's statutory objectives are better met.

In assessing eligibility for Diversion, the Chief Executive will consider:

- Offender-based criteria; and
- Offence-based criteria.

The weight given to particular criteria will be a matter for the Chief Executive's discretion. Ultimately the Chief Executive will determine whether the public interest is best served by the continuation of a prosecution or by an offer of Diversion.

In the 2017/18 year there were 3 cases considered for alternative enforcement action being:

Waituna Investments Ltd

As part of an alternative Justice agreement Waituna Investments Limited committed to the rehabilitation of a wetland and a contribution of land to assist the Waituna project and an agreement to part pay investigation costs.

Ken Saunders

As part of an alternative Justice agreement Ken Saunders committed to the community service work and an agreement to part pay investigation costs.

Paul Cathcart

As Part of the Diversion process Paul Cathcart attended and effluent management course, part paid investigation costs and completed community service.

9.6 Prosecutions

Environment Southland follows its Enforcement Policy. Prior to proceeding with prosecution the matter is put before the Enforcement Decision Group (EDG). The EDG assesses each case against the principles of the Solicitor General's Prosecution Guidelines.

Once the EDG process is completed the case can cease, recommend a different outcome, ask for more information or recommend for an independent legal review. A legal review is returned and final sign off is completed by the Chief Executive Officer.

This means:

- The evidence which can be presented in court is sufficient to provide a reasonable prospect of conviction – the Evidential Test; and
- Prosecution is required in the public interest – the Public Interest Test.

The matters that were prosecuted and completed in the 2017/18 year were:

Defendant	Offence Date	Charge	Charge description	Sentencing	Outcome	Fine
Dunrobin Farm Ltd EAC-20172415	14/10/2016	15(1)(b)	Discharge of a contaminate to land which may enter water	04/10/2017	Convicted and fine issued.	\$37,500
Hans Vernooij EAC-20172411	22/11/2016 – 03/03/2017	15(1)(b) 15(2A)	Discharge of a contaminate to land which may enter water Contravened a regional rule	15/10/2017	Convicted and fine issued	\$19,625
White Waters Ltd EAC-20172410	22/11/2016 – 03/03/2017	15(1)(b) 15(2A)	Discharge of a contaminate to land which may enter water Contravened a regional rule	15/10/2017	Convicted and fine issued	\$19,625
Petroleum Solutions Ltd EAC-20172366	01/08/2016	15(1)(d) 15(2A)	Discharge of a contaminate to land from an industrial site Contravened a regional rule	28/11/2017	Discharged without conviction under S.106	Investigation costs \$4,500
Keith Braithwaite EAC-20172366	01/08/2016	15(1)(d) 15(2A)	Discharge of a contaminate to land from an industrial site Contravened a regional rule	28/11/2017	Convicted and fine issued.	\$7,124 Investigation costs \$4,500
Warren MacPherson EAC-20172452	09/12/2016	15(1)(b)	Discharge of a contaminate to land which may enter water	04/12/2017	Convicted and fine issued.	\$41,250 Costs: \$778
McDowall Rural Services Ltd EAC-20172464	01/10/2016 – 25/03/2017	2 under 15(1)(d) 2 under 15(1)(b) 2 under 15(1)(c) 1 under 338(1)(c) 1 under 9(2)(a) 1 under 338(1)(b)	Discharge of a contaminate to land from an industrial site Discharge a contaminate to land which may enter water Discharge of a contaminate to air from an industrial site Breach of a A/N Land use contravening a regional rule Breach of EO	19/02/2018	Convicted discharged	\$0

Defendant	Offence Date	Charge	Charge description	Sentencing	Outcome	Fine
Kent McDowall EAC-20172467	01/10/2016 – 25/03/2017	2 under 15(1)(d) 2 under 15(1)(b) 2 under 15(1)(c) 1 under 338(1)(b) 1 under 9(2)(a) 1 under 338(1)(c)	Discharge of a contaminate to land from an industrial site Discharge of a contaminate to air from an industrial site	19/02/2018	Convicted and fine issued	\$28,300
Gordon McDowall EAC-20172466	01/10/2016 – 25/03/2017	2 under 15(1)(d) 2 under 15(1)(b) 2 under 15(1)(c) 2 under 338(1)(b) 338(1)(c) 9(2)(a)	Discharge of a contaminate to land from an industrial site	19/02/2018	Convicted and fine issued	\$31,425
Gelita NZ Ltd EAC-20172433	01/10/2016	2 under 15(1)(d)	Discharge of a contaminate to land from an industrial site	19/02/2018	Convicted and fine issued	\$53,400
Cameron Kerr EAC-20172465	01/10/2016 – 03/03/2017	15(1)(d) 9(2)(a)	Discharge of a contaminate to land from an industrial site	19/02/2018	Convicted and fine issued	\$21,374
Wendon Creek Cattle Co Ltd EAC-20172449	24/11/2016	15(2A)	Contravened a regional rule	19/02/2018	Convicted and fine issued Restorative Justice meeting resulting in EO	\$15,000
Nigel Elder EAC-20172448	24/11/2016	15(2A)	Contravened a regional rule	19/02/2018	Discharged without conviction	Investigation costs \$4000
Fernlea Farm Limited EAC-20172454	09/11/2016	15(2A)	Contravened a regional rule	04/12/2017	Convicted and sentenced	\$37,500
Wayne Carpenter EAC-20172454	01/10/2016 – 04/04/2017	6 under 338(1)(b) 6 under 15(2A)	Breach of an E/O Contravened a regional rule	19/02/2018	Convicted and sentenced	150 hours community service
Blue Sky Meats (N.Z) Ltd EAC-20172456 EAC-20172477	21/02/2017 – 16/09/2017	3 under 15(1)(b)	Discharge of a contaminate to land which may enter water	19/02/2018	Convicted and fine issued.	\$116,250
Vendale Ltd EAC-20172400	20/10/2016	15(1)(b)	Discharge of a contaminate to land which may enter water	11/06/2018	Convicted and fine issued Restorative Justice meeting resulting in EO	\$13,200
Benlyon Ltd EAC-20172400	20/10/2016	15(1)(b)	Discharge of a contaminate to land which may enter water	11/06/2018	Convicted and fine issued Restorative Justice meeting resulting in EO	\$13,200
Allan Baird EAC-20172400	20/10/2016	15(1)(b)	Discharge of a contaminate to land which may enter water	11/06/2018	Convicted and fine issued Restorative Justice meeting resulting in EO	\$13,200

Glossary

Ammoniacal Nitrogen (NH ₄ N)	Ammoniacal nitrogen is rarely found at high levels in natural waters. Its presence is an excellent means of detecting pollution. It is a major component in urine excreted by mammals. High levels of ammoniacal nitrogen are potentially toxic to aquatic life.
ANZECC	The Australia New Zealand Environmental Conservation Council. This organisation develops guidelines that are applicable to the Australian and New Zealand situations.
Black Water	Wastewater containing human faeces and urine, generated from toilets.
cBOD ₅	Carbonaceous Biochemical Oxygen Demand – A measure of the ability of contaminants to consume and remove oxygen from water, reducing its availability to aquatic life.
CCA	Copper (Cu), Chromium (Cr) and Arsenic (As) are the usual metals analysed for when considering the timber treatment process. High levels of metals can become toxic to aquatic life.
Clarity	The distance that can be seen through the water. The higher the clarity the greater the visibility in the water.
Chl <i>a</i>	Chlorophyll <i>a</i> – the pigment in plant cells which captures light energy for photosynthesis.
DAF Unit	Dissolved Air Flotation unit. This is an effluent treatment system whereby air is pumped into the effluent under pressure. When the air is discharged into the tank containing effluent, it returns to atmospheric pressure, the dissolved air comes out of suspension and forms bubbles on the particulate matter. These bubbles and the particulate matter then float to the surface to be removed as sludge.
DIN	Dissolved Inorganic Nitrogen – Nitrate + Nitrite Nitrogen plus Ammoniacal Nitrogen.
DO	Dissolved Oxygen – Oxygen is important to sustain life. DO is the amount of oxygen dissolved in water.
DRP	Dissolved Reactive Phosphorus – A form of phosphorus that is readily available to plants to sustain growth. High levels of Phosphorus and Nitrogen in receiving waters can promote the growth of nuisance weeds in waterways.

<i>E.coli</i>	Escherichia coli - <i>E.coli</i> is a bacterium that is commonly found in the lower intestine of warm-blooded organisms. They are a subset of the Faecal Coliform group and are regarded as an indicator of faecal contamination and therefore the presence of pathogenic (harmful) bacteria.
EC	Electrical Conductivity – The ability of water to conduct electricity. This gives a conservative measure of the mineral content of water. Generally, the greater the conductivity of the water, the greater the mineral content.
ES	Environment Southland
Formaldehyde	An organic compound that is a by-product of the resins used to bind MDF particles together
Faecal Coliforms (FC)	Organisms that are present in the gut and faeces of warm-blooded animals and are used as indicators of the presence of pathogenic organisms.
g/m ³	Grams of material in 1 cubic metre of water – A measure of concentration in a liquid or gas.
Grey Water	Wastewater that is generated from domestic activities like clothes washing, dishwashing and bathing.
Heavy Metals	A set of elements that exhibit metallic properties that typically have high atomic weights and that can damage living things and tend to accumulate in the food chain.
Loading	The quantity of contaminants discharged over a set period of time.
LTP	Long-term Plan. This is a document projecting Council activities, as required by the Local Government Act 2002.
mg/kg	Unit to measure concentration in a solid (equivalent to parts per million (ppm)).
MPN	Most Probable Number – a statistical estimate of the mean density of bacteria in a water sample.
Nitrate-N	An oxidised form of Nitrogen – Nitrate Nitrogen is soluble and is therefore readily available to plant life to sustain growth.
PAH	Polycyclic Aromatic Hydrocarbons – A class of over 100 different organic molecules composed of only carbon and hydrogen. PAHs are flat molecules with each carbon having three adjacent carbon atoms similar to the structure of graphite. The USEPA has listed 16 of these as priority chemicals due to their potential health effects.

PM ₁₀ Particulate Matter	The unburnt material that is commonly discharged with the gas or smoke from a fire or boiler. This is measured as PM ₁₀ , meaning a particle size of 10 micrometres or less.
Sewage	Domestic human wastewater and excrement.
Sewerage system	A pipe network use to transport sewage.
Stormwater system	A system of pipes and drains that carry rain and snowmelt from street surfaces, roofs and other paved areas. The stormwater system leads directly to waterways.
Total Filterable Particulate Matter	Quantity of particles collected by collected on a filter.
Total Nitrogen (TN)	An important element in the growth of plant material. It is required for protein formation and consequently animals have a significant N content. Total Nitrogen is a measure of all nitrogen present
Total Phosphorus (TP)	Phosphorus is an important element in the growth of plant material. Total Phosphorus is a measure of all phosphorus present, including all forms of phosphorous whether it is tightly bound to particulate matter or potentially available to plant life.
Total Suspended Solid (TSS)	Very small particles that have the potential to affect the colour and clarity of a waterway and can potentially settle out onto a streambed smothering aquatic life in waterways.
Turbidity	Turbidity is a laboratory measurement to determine the clarity of the water. The higher the result the more cloudy the water.
µg/m ³	A measure of concentration in a liquid or gas. Micrograms of material in 1 cubic metre of water. 1 gram = 1,000,000 micrograms.
USEPA	US Environmental Protection Agency
Wastewater	Water that has been used in the home, in a business or as a part of an industrial process

Compliance Team (as at October 2018)



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Compliance manager

Technical team



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Team leader compliance technical



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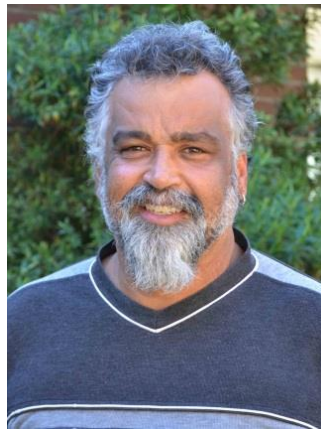


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